

From: Kirk Dorius[SMTP:KIRKDORIUS@GMAIL.COM]
Sent: Tuesday, October 18, 2011 11:56:01 AM
To: BRC
Cc: Peterson, Per
Subject: Flibe Energy Comments on the RFCT BRC Report

Timothy A. Frazier, Designated Federal Officer
U.S. Department of Energy
1000 Independence Avenue, SW.
Washington, DC 20585

Dear Mr. Frazier,

As discussed with Col. Bryan Bennett the morning of the public hearing in Atlanta on October 18, 2011, please find attached an electronic copy of comments from Flibe Energy Inc. on the earlier draft RFCT Report. Dr. Per Peterson is cc'd here as Co-chair of the Reactor and Fuel Cycle Technology Subcommittee. Flibe Energy Inc. is also in ongoing discussions with the United Kingdom's Department of Energy and Climate Change (DECC) and attached are our preliminary comments to the DECC regarding assessment of Liquid-Fluoride Thorium Reactor (LFTR) technology relative to various criteria that DECC is currently using to prepare reports similar to those being prepared by the BRC.

Included below is a brief summary of our efforts and progress.

We are furthering development of the Liquid Fluoride Thorium Reactor (LFTR) originally demonstrated at Oak Ridge National Lab (ORNL) and, to that end, are working towards demonstrating a small modular LFTR design around 2016. The physics, architecture and operational fundamentals of LFTR were well-established by the ORNL molten salt reactor experiment (MSRE) between 1964-1972. LFTR can provide not only safe, sustainable, carbon-free electricity generation, but can also drive desalination and synthesized-fuels production including hydrogen, ammonia, and diesel substitutes. LFTR operation also produces a number of valuable byproducts useful for industrial, medical and space exploration applications. We are exploring collaborating with a number of government contractors, national labs, NASA, and university research groups to further develop LFTR technologies and these LFTR technology applications.

We have also seen tremendous progress in the UK and anticipate significant research opportunities and progressive regulatory environment due to LFTR's positive impact on nuclear waste management issues. During our two-week trip to the UK in September, we briefed the appropriate Members of Parliament, Department of Energy and Climate Change staff, many peers in the House of Lords, top environmentalist organization leaders, leading researchers from Oxford, Cambridge and Imperial College, and the managing directors of multi-national energy utilities. These efforts have initiated formation of an All-Party Parliamentary Panel to more fully explore thorium energy for the UK and joint research discussions with UK universities regarding a chloride variation of LFTR technology potentially useful for converting the UK's stockpiled 100 tons of plutonium into starter fuel for LFTR reactors. The plutonium could be fully consumed to breed uranium 233, which could then be used to bring 100 GW of LFTR power online in the UK with inexpensive, abundant thorium as the sole input thereafter.

LFTR technology could have tremendous impact on the challenges presented by nuclear waste in the United States as well. LFTRs produce greatly reduced amounts of waste relative to solid-fueled reactors and can actually consume the available fissile materials in the vast US

spent nuclear stockpiles. The United States also has a stockpile at ORNL of uranium 233, the preferred starter fuel for LFTRs, that could be used to start the first fleet of LFTRs in the US, however, this stockpile is currently slated for down blending and disposal at great taxpayer expense and is the subject of separate lengthy discuss for a later date.

We believe thorium and LFTR technology have tremendous roles to play in America's Nuclear Future and welcome the opportunity to discuss any questions that you or any members or staff of the BRC may have.

There is a wealth of video presentations, power point presentations, media coverage and technology discussion available on our media page (www.flibe-energy.com/media) and on our blog (www.energyfromthorium.com). The TEDx and TEAC3 videos are relatively brief summaries of LFTR technology. A much longer discussion is available here (<http://thoriumremix.com/2011/>) for those who are interested in or tasked with a more full understanding of the potential that thorium and LFTR technology hold for America's nuclear future.

Also attached is a brief one-page summary of some of the key attributes of thorium and LFTR technology.

Best regards,

--

Kirk Dorius
Flibe Energy Inc.
kirkdorius@gmail.com
tel. 512-934-0794